

## CLAIMS

1. A fluid-dynamic device capable of being influenced by forces comprising a body (8;42;72;92;102) around which a fluid is arranged to flow, which fluid when flowing round the body exerts a force against it with a component which is directed across the fluid's direction of flow (V1-V5), where the body (8;42;72;92;102) is made of a sailcloth or foil-like material and comprising two sailcloth portions (45,46;75,76;95,96;105,106) with a common upstream edge (3;43;73;93;103,104), the upstream edge (3;43;73;93;103,104) being arranged to extend substantially across the fluid's direction of flow (V1-V5) when it is flowing around the body, and the body (8;42;72;92;102) is supported by a holder (11;41;77,78;97;112,114) with two connecting devices (12,13;16,17;111,112,114) which are arranged for connection with the body (8;42;72;92;102) at respective ends of the upstream edge (3;43;73;93;103,104) and for tightening the sailcloth portions (45,46;75,76;95,96;105,106) between them while exerting a force or a reaction force along a connecting line, i.e. a force line (84;99;125,126) extending between the connecting devices (12,13;16,17;111,112,114), characterised in that the sailcloth portions (45,46;75,76;95,96;105,106) have respective upstream areas (6;9;50,51) extending between the upstream edge (3;43;73;93;103,104) and the connecting line (84;99;125,26), whereby the upstream areas (6;9;50,51) are curved across the connecting line (84;99;125,126) when the force is exerted along it, and the sailcloth portions (45,46;75,76;95,96;105,106) define a space (39).
2. A fluid-dynamic device according to claim 1, characterised in that at least one of the connecting devices (12,13,16,17;111,112,114) is mounted outside the space (39).
3. A fluid-dynamic device according to claim 1 or 2, characterised in that the holder comprises a mast (11;25;41;77), which supports the connecting devices (12,13;16,17).
4. A fluid-dynamic device according to claim 3, characterised in that the mast may be elastically curved, whereby it has an inherent tendency to be straightened up, thereby creating the forces.
5. A fluid-dynamic device according to one of the preceding claims, characterised in that the sailcloth portions (45,46;75,76;95,96;105,106) are connected to connecting elements (54,55) which attempt to stretch the upstream areas (6;9;50,51) in the direction away from downstream areas.

- 5 6. A fluid-dynamic device according to claim 5,  
characterised in that the connecting elements (54,55) may be mounted  
outside the body (42;72;92;102), inside the space (39) in the body  
(42;72;92;102) and/or in the sailcloth portions  
(45,46;75,76;95,96;105,106).
- 10 7. A fluid-dynamic device according to one of the preceding claims,  
characterised in that in the upstream areas (6;9;50,51) of the sailcloth  
portions (45,46;75,76;95,96;105,106) there is provided at least one  
opening (56,57) via which fluid can flow into but not out of the space  
(39) defined by the sailcloth portions (45,46;75,76;95,96;105,106).
- 15 8. A fluid-dynamic device according to one of the preceding claims,  
characterised in that in a downstream area of the sailcloth portions there  
is provided at least one discharge opening (58,58') via which fluid can  
flow out of the space (39) between the sailcloth portions  
(45,46;75,76;95,96;105,106).
- 20 9. A fluid-dynamic device according to claim 7 or 8,  
characterised in that the size of the openings (56,57,58) is variable.
- 20 10. A fluid-dynamic device according to one of the preceding claims,  
characterised in that the body may be wound about an axis along the  
upstream edge and the admission openings are elongated, extending in a  
direction across the axis.
- 25 11. A fluid-dynamic device according to claims 1-6,  
characterised in that the space (39) is closed and the body  
(8;42;72;92;102) is provided with a stop valve (59) for admission or  
discharge of air, and for closing the space (39).
- 30 12. A fluid-dynamic device according to one of the preceding claims,  
characterised in that the body (8;42;72;92;102) is arranged so that fluid  
flows round it from at least two opposite directions and comprises two  
opposite edges (103,104) which are arranged to act alternately as an  
upstream edge and a downstream edge, both edges being provided with  
connecting devices (112,114).
- 35 13. A fluid-dynamic device according to one of the preceding claims,  
characterised in that it is a component of a boat (27;40), the holder  
comprising a mast (11;41;77,78;97;112,114) of the boat (27;40) and the  
body (8;42;72;92;102) being a sail.
14. A fluid-dynamic device according to one of the claims 1-12,  
characterised in that it is a component of a wind power machine, the

holder (11;41;77;97;112,114) and the body (8;42;72;92;102) being components of, e.g. a windmill.

15. A fluid-dynamic device according to one of the claims 1-12, characterised in that it is a component of a hydraulic motor.
- 5 16. A fluid-dynamic device according to one of the claims 1-12, characterised in that it is a component of an aircraft.
- 10 17. A fluid-dynamic device according to one of the preceding claims, where the body's (8;42;72;92;102) cross section, when a fluid flows around the body, is in the shape of a wing profile which at the upstream edge (3;43;73;93;103,104) has a nose, wherein a nose circle (10) is approximately inscribed, characterised in that the length of the upstream areas (6;9;50,51), measured in the body's (8;42;72;92;102) cross section, approximates to a fourth of the nose circle's (10) circumference
- 15 18. A fluid-dynamic device according to one of the preceding claims, characterised in that the sailcloth portions are substantially similar in shape.
- 20 19. A fluid-dynamic device according to one of the claims 1-17, characterised in that one sailcloth portion is narrower than the other, considered in the direction perpendicular to the upstream edge.